What is claimed is:

- 1. A method for providing assistance to a position receiver in a location system consisting of a Global Navigation Satellite System (GNSS) and a synchronized network of positioning-unit devices, said synchronized network of positioning-unit devices providing synchronized network time and synchronized network frequency, the method comprising:
 - a) processing Global Navigation Satellite System (GNSS) signals at a positioning-unit device to determine assistance data, including:
 - i) the time-of-arrival of Global Navigation Satellite System (GNSS) signals relative to said synchronized network time, and;
 - ii) the frequency of Global Navigation Satellite System (GNSS) signals relative to said synchronized network frequency;
 - b) incorporating said determined assistance data in a positioning signal transmitted by said positioning unit device;
 - c) analyzing said positioning signal at said position receiver to:
 - i) extract said determined assistance data, and
 - ii) determine said synchronized network time and said synchronized network frequency;
 - d) searching for Global Navigation Satellite System (GNSS) signals at said position receiver in a range responsive to said extracted assistance data, and said determined synchronized network time and said synchronized network frequency.
- 2. The method of claim 1, wherein said determined synchronized network time includes a relative received time offset of said positioning-unit device.
- 25 3. The method of claim 1, wherein said determined synchronized network time is derived from the calculation of a position, velocity, time (PVT) solution at said position receiver from said synchronized network of positioning-unit devices.
- 4. The method of claim 1, wherein said assistance data further includes a time offset between Global Navigation Satellite System (GNSS) system time and said synchronized network time.
 - 5. The method of claim 1, wherein said assistance data further includes a frequency offset between Global Navigation Satellite System (GNSS) system frequency and said synchronized network frequency.
- 35 6. The method of claim 1, wherein said assistance data further includes satellite orbit information of said Global Navigation Satellite System (GNSS).
 - 7. The method of claim 1, wherein said assistance data further includes a frequency rate of said Global Navigation Satellite System (GNSS) signals.

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- 8. The method of claim 1, wherein said assistance data further includes a frequency acceleration of said Global Navigation Satellite System (GNSS) signals.
- 9. A method for providing assistance to a position receiver in a location system consisting of a Global Navigation Satellite System (GNSS) and a synchronized network of positioning-unit devices, said synchronized network of positioning-unit devices providing synchronized network time, the method comprising:
 - a) processing Global Navigation Satellite System (GNSS) signals at a positioning-unit device to determine assistance data including the time-of-arrival of Global Navigation Satellite System (GNSS) signals relative to said synchronized network time;
 - b) incorporating said determined assistance data in a positioning signal transmitted by said positioning unit device;
 - c) analyzing said positioning signal at said position receiver to:
 - i) extract said determined assistance data, and
 - ii) determine said synchronized network time;
 - d) searching for Global Navigation Satellite System (GNSS) signals at said position receiver in a range responsive to said extracted assistance data, and said determined synchronized network time.

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- 10. The method of claim 9, wherein said determined synchronized network time includes a relative received time offset of said positioning-unit device.
- 25 11. The method of claim 9, wherein said determined synchronized network time is derived from the calculation of a position, velocity, time (PVT) solution at said position receiver from said synchronized network of positioning-unit devices.
- 12. The method of claim 9, wherein said assistance data further includes a time offset between Global Navigation Satellite System (GNSS) system time and said synchronized network time.
 - 13. The method of claim 9, wherein said assistance data further includes satellite orbit information of said Global Navigation Satellite System (GNSS).

- 14. A method for providing assistance to a position receiver in a location system consisting of a Global Navigation Satellite System (GNSS) and a synchronized network of positioning-unit devices, said synchronized network of positioning-unit devices providing synchronized network frequency, the method comprising:
 - a) processing Global Navigation Satellite System (GNSS) signals at a positioning-unit device to determine assistance data including the frequency of Global Navigation Satellite System (GNSS) signals relative to said synchronized network frequency;
 - b) incorporating said determined assistance data in a positioning signal transmitted by said positioning unit device;
 - c) analyzing said positioning signal at said position receiver to:
 - i) extract said determined assistance data, and
 - ii) determine said synchronized network frequency;
 - d) searching for Global Navigation Satellite System (GNSS) signals at said position receiver in a range responsive to said extracted assistance data and said determined synchronized network frequency.
- 15. The method of claim 14, wherein said assistance data further includes a frequency offset between Global Navigation Satellite System (GNSS) system frequency and said synchronized network frequency.
- 16. The method of claim 14, wherein said assistance data further includes satellite orbit information of said Global Navigation Satellite System (GNSS).
- 17. The method of claim 14, wherein said assistance data further includes a frequency rate of said Global Navigation Satellite System (GNSS) signals.
 - 18. The method of claim 14, wherein said assistance data further includes a frequency acceleration of said Global Navigation Satellite System (GNSS) signals.

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